



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,417	08/24/2004	Hiroshi Kaneta	8017-1141	7384

466 7590 08/29/2006

YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

LEE, CYNTHIA K

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/505,417

Applicant(s)

KANETA ET AL.

Examiner

Cynthia Lee

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This Office Action is responsive to the after final amendment filed on 8/7/2006. Claims 1-17 are pending. Claims 5, 11, and 12 have been amended. Applicant's arguments with respect to the independent claim 1 have been fully considered and are persuasive. The instant claims are rejected under new grounds of rejections and thus, claims 1-17 are rejected for reasons of record as set forth herein below.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takatani (JP 07-220755)

Takatani discloses a flat secondary battery comprising an anode, a cathode and a separator disposed in between. The cathode and anode terminals are attached to the corresponding electrodes attached on the opposite sides of the cell can. Takatani discloses a PTC component (applicant's third terminal) attached directly to the cathode current collector. The PTC component does not directly contact the cathode and anode terminals. See fig. 2.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1745

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 9, 10, 13, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanai (US 6458485).

Yanai discloses a secondary battery comprising an anode, a cathode and a separator disposed in between. Yanai discloses electrode terminals 9 attached to the electrode collectors 3 (see fig. 6). Yanai discloses a PTC element 5 (applicant's third terminal) attached directly to current collectors 42 and does not directly contact the terminals (see fig. 1). Yanai discloses that the PTC element extends perpendicular to the extending direction of the electrodes (instant claim 3). All the battery elements are housed in the battery can (instant claims 16 and 17).

Regarding claim 4, Yanai discloses a PTC element (applicant's temperature detecting sensor) attached to a second set of current collector (applicant's third terminal).

Regarding claim 15, the Examiner notes that the PTC element is opposite and remote from the terminals. See fig. 1 and 6.

Yanai discloses that the battery is cylindrical but does not disclose that the battery is flat (instant claim 1). However, flat batteries are common in the art (for example, see Takatani). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Yanai's battery of various sizes and shapes, such as a flat battery for the benefit of using it as a cell phone battery. The courts have held that changes in shape are a matter of choice which a person of

Art Unit: 1745

ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed invention was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP 2144.04.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanai (US 6458485) as applied to claim 1 above and incorporated herein, and in view of Takatani (JP 07-220755).

Yanai discloses all the elements of claim 1. Yanai does not disclose that the casing is of a laminate film. However, Takatani discloses a flat battery wherein the battery elements are laminated [claim 1]. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate Yanai's battery elements should one choose to make Yanai's battery a flat battery, for the benefit of keeping the flat layers as a uniform body for better electrical connection.

Claims 5, 8, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanai (US 6458485) as applied to claim 1 above and incorporated herein, and further in view of Higashijima (US 5886502).

Yanai does not disclose a third terminal connected to a control circuit. However, Higashijima discloses a cell balancer circuit connected to cells connected in series to detect difference in voltage among the cells. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a cell balancer circuit to the cell terminal for the benefit of detecting the voltage of the cells and

Art Unit: 1745

achieving a balance of voltages among the cells, as taught by Higashijima (abstract, 1:5-10, 2:40-45). The Office notes that since Yanai's PTC element is connected to the cathode terminal via the current collector, the PTC element is necessarily connected to a cell balancer circuit.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Lee whose telephone number is 571-272-8699. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**JONATHAN CREPEAU**  
**PRIMARY EXAMINER**